Barber Foods	**)**	**Departmental**
Cumberland County	**)**	**Findings of Fact and Order**
Portland, Maine	**)**	**Air Emission License**
A-569-71-E-A/R	**)**	

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Barber Foods of Portland, Maine has applied to renew their Air Emission License for six main units. They are also seeking an amendment to install an additional 2.4 MMBtu/hr natural gas fired Fryer #2 and to increase the annual fuel limit from 30,000,000 cubic feet of natural gas to 90,000,000 cubic feet.

This renewal also includes correcting unit #22 as being oil fired as opposed to natural gas as stated in the previous license. It also addresses particulate matter (PM) and volatile organic compound (VOC) emissions from the frying lines and the oven which were not included in the last renewal.

B. Emission Equipment

Barber Foods is authorized to operate the following air emission units:

Fuel Burning Equipment

Equipment	Type of Equipment	Date of Construction	Maximum Capacity (MMBtu/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (i.e. gal/hr)	Stack #
Unit #1	Boiler	1991	5.23	Natural Gas	4980 scf/hr	1
Unit #2	Boiler	1991	5.23	Natural Gas	4980 scf/hr	1
Unit #6	Fryer #1	1987	2.3	Natural Gas	2190 scf/hr	6 A,B
Unit #7	Fryer #3	1991	2.3	Natural Gas	2190 scf/hr	7 A,B
Unit #9	Oven	1991	2.2	Natural Gas	2095 scf/hr	9A,B,C
Unit #22	Boiler	1987	1.42	#2, 0.5%	10.0 gal/hr	22
Unit #23	**Fryer #2**	**1996**	**2.4**	**Natural Gas**	**3000 scf/hr**	**23A&B**

Bold denotes new equipment.

Barber Foods also contains 14 additional natural gas burning units with a combined capacity of 4.84 MMBtu/hr. None of these units have a design capacity greater than 1.0 MMBtu/hr and are mentioned for inventory purposes only.

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future license allowed emissions, as follows:

Pollutant	Future License (TPY)	Sig.Level (TPY)
PM	13.9	100
PM_{10}	13.9	100
SO_2	1.81	100
NO_x	4.99	100
CO	3.91	100
VOC	2.87	50

This modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT) as defined in Chapter 100 of the Air Regulations. BACT is a top down approach to selecting air emission controls considering economic, environmental and energy impacts.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. New Unit #23

Unit #23 (Fryer #2) is Fulton Furnace manufactured in 1996 and has a design capacity of 2.4 MMBtu/hr operating on natural gas. It is an indirect heating unit utilizing Paratherm as the heat transfer medium. The exhaust gases from the boiler are separate from the exhaust from the frying unit.

Unit #23 will utilize natural gas as the best control for emissions and is therefore considered to be receiving BACT.

A summary of the BACT analysis for each of the pollutants is discussed below:

1. PM, PM_{10}, SO_2, NO_X, CO and VOC emission limits for the heat source are based upon AP-42 data dated 10/96 for natural gas boilers smaller than 100 MMBtu/hr.

2. PM, PM_{10}, and VOC emission limits for the fryer are based upon engineering judgement, AP-42 data and testing at similar facilities using a batter process. Production rate for this unit is an average of 8,800 pounds of chicken per hour.

3. MEDEP Regulations Chapter 105 (General Process Source Particulate Emission Standard) regulates PM limits from the fryer. However, 3.08 lb/hr is more stringent and shall be used.

4. Opacity from Stack #23A (the stack utilized for the natural gas exhaust from Boiler #23) shall not exceed 10% on a six (6) minute block average basis.

5. Opacity from Stack #23B (the stack utilized for Fryer #2) shall not exceed 20% on a six (6) minute block average basis, except for no more than one (1) six minute block average in a one hour period.

C. Unit #1 and #2

Unit #1 and #2 are Cleaver Brooks boilers manufactured in 1991 and each has a design capacity of 5.23 MMBtu/hr operating on natural gas. These two units are not subject to New Source Performance Standards (NSPS) Subpart Dc, which is applicable to boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

BPT for Unit #1 and #2 is the following:

- Use of natural gas.
- SO_2, NO_x, CO and VOC emission limits are based on AP-42 data dated 10/96 for natural gas boilers smaller than 100 MMBtu/hr.
- Emission limits for PM and PM_{10} are regulated by MEDEP Regulations, Chapter 103 for natural gas. However, 0.01 lb/MMBtu is more stringent and shall be used.
- Visible emissions from the stack serving Boiler #1 and #2 (Stack 1) shall not exceed 10% opacity on a six (6) minute block average basis.

D. Unit #6 and #7

Unit #6 (Fryer #1) was manufactured in 1987 and Unit #7 (Fryer #3) was manufactured in 1991. Each has a design capacity of 2.30 MMBtu/hr operating on natural gas.

BPT for Unit #6 and #7 is the following:

- Use of natural gas.
- PM, PM_{10}, SO_2, NO_x, CO and VOC emission limits for the heat sources are based on AP-42 data dated 10/96 for natural gas boilers smaller than 100 MMBtu/hr.
- PM, PM_{10}, and VOC emission limits for the fryers are based upon engineering judgement, AP-42 data and testing at similar facilities using a batter process. Production rate for this unit is an average of 4,400 pounds of chicken per hour from Fryer #1 and 5,000 pounds of chicken per hour from Fryer #3.
- MEDEP Regulations Chapter 105 (General Process Source Particulate Emission Standard) regulates PM limits from the fryer. However, 1.54 lb/hr for Fryer #1 and 1.75 lb/hr for Fryer #3 is more stringent and shall be used.
- Visible emissions from the stacks serving Unit #6 and #7 (Stacks 6A and 7A) shall not exceed 10% opacity on a six (6) minute block average basis.

- Visible emissions from the stacks serving Fryer #1 and #3 (Stacks 6B and 7B) shall not exceed 20% on a six (6) minute block average basis, except for no more than one (1) six minute block average in a one hour period.

E. Unit #9

Unit #9 is an oven utilizing direct heat as well as steam to cook the product. It was manufactured in 1991 with a design capacity of 2.20 MMBtu/hr operating on natural gas. Three stacks vent from this unit: Stack 9A is the discharge for the heat source; Stack 9B is the discharge for the oven entrance (where the product enters the oven); Stack 9C is the discharge for the oven exit.

BPT for Unit #9 is the following:

- Use of natural gas.
- PM, PM_{10}, SO_2, NO_x, CO and VOC emission limits for the heat source are based on AP-42 data dated 10/96 for natural gas boilers smaller than 100 MMBtu/hr.
- PM, PM_{10}, and VOC emission limits for the oven discharge are based upon engineering judgement, AP-42 data and testing at similar facilities using a batter process. Production rate for this unit is an average of 1,500 pounds per hour.
- MEDEP Regulations Chapter 105 (General Process Source Particulate Emission Standard) regulates PM limits from the oven. However, 0.53 lb/hr is more stringent and shall be used.
- Visible emissions from the stack serving the heat source of Unit #9 (Stacks 9A) shall not exceed 10% opacity on a six (6) minute block average basis.
- Visible emissions from the stacks serving the oven dishcarge (Stacks 9B and 9C) shall not exceed 10% on a six (6) minute block average basis, except for no more than one (1) six minute block average in a one hour period.

F. Unit #22

Unit #22 is a boiler which provides space heating. It was manufactured in 1987 with a design capacity of 2.20 MMBtu/hr operating on #2 fuel oil with a maximum sulfur content of 0.5% by weight. This unit is not subject to NSPS.

BPT for Unit #22 is the following:

- PM and PM_{10} emission limits are based upon past experience with boilers of similar size and fuel type.
- SO_2, NO_x, CO and VOC emission limits are based on AP-42 data dated 10/96 for commercial boilers firing distillate oil (#2 fuel oil) with a maximum sulfur content of 0.5% by weight.
- MEDEP Chapter 106 regulates fuel oil sulfur content. 0.5% sulfur by weight is more stringent and shall be used.
- Visible emissions from the stack serving Boiler #22 (Stack 22) shall not exceed 20% opacity on a six (6) minute block average basis.

G. Annual Emission Restrictions

Barber Foods shall be restricted to the following annual emissions, based on a 12 month rolling total firing no more than:

- 90,000,000 cubic feet of natural gas facility wide.
- 50,000 gallons of 0.5% sulfur #2 fuel oil in Boiler #22.

Total Allowable Annual Emissions for the Facility
(used to calculate the annual license fee)

Pollutant	Tons/yr
PM	13.9
PM_{10}	13.9
NO_X	4.99
SO_2	1.81
CO	3.91
VOC	2.87

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Modeling and monitoring are not required of a renewal if the total emissions of any pollutant released do not exceed the following:

Pollutant	TPY
PM	50
PM_{10}	25
SO_2	50
NO_X	100
CO	250

Based on the above total facility emissions, Barber Foods is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-569-71-E-A/R, subject to the following conditions:

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either

the control technology analysis or the ambient air quality standards analysis, or both.

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.

(6) The license does not convey any property rights of any sort, or any exclusive privilege.

(7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.

(8) The licensee shall maintain sufficient records, to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a license or amendment shall not stay any condition of the license.

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

(i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
b. pursuant to any other requirement of this license to perform stack testing.

(ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

(iii) submit a written report to the Department within thirty (30) days from date of test completion.

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

(i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
(ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
(iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

(13) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and

conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

(15) Upon written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

(16) **New Unit #23**

A. Capacity shall not exceed 2.4 MMBtu/hr.

B. Emissions shall not exceed the following:

Unit #23 (Fryer #2) Emission Limits

Pollutant	lb/hr from 23A	lb/hr from 23B
PM	0.02	3.08
PM_{10}	0.02	3.08
SO_2	0.01	n/a
NO_X	0.24	n/a
CO	0.20	n/a
VOC	0.01	0.62

C. Visible emissions from Stack #23A (the stack utilized for the natural gas exhaust from Boiler #23) shall not exceed 10% opacity on a six (6) minute block average basis.

D. Visible emissions from Stack #23B (the stack utilized for Fryer #2) shall not exceed 20% opacity on a six (6) minute block average basis, except for no more than one (1) six minute block average in a one hour period.

(17) **Unit #1 and #2**

A. Capacity of each unit shall not exceed 5.23 MMBtu/hr.

B. Emissions from each unit shall not exceed the following:

Unit #1 and #2 Emission Limits

Pollutant	lb/MMBtu	lb/hr
PM	0.01	0.05
PM_{10}	n/a	0.05
SO_2	n/a	0.01
NO_X	n/a	0.52
CO	n/a	0.10
VOC	n/a	0.02

C. Visible emissions from the stack serving Boiler #1 and #2 (Stack 1) shall not exceed 10% opacity on a six (6) minute block average basis.

(18) **Unit #6 and #7**

A. Capacity of each unit shall not exceed 2.3 MMBtu/hr.

B. Emissions shall not exceed the following:

Unit #6 (Fryer #1) and #7(Fryer #2) Emission Limits

Pollutant	lb/hr from 6A or 7A	lb/hr from 6B	lb/hr from 7B
PM	0.02	1.54	1.75
PM_{10}	0.02	1.54	1.75
SO_2	0.01	n/a	n/a
NO_X	0.23	n/a	n/a
CO	0.08	n/a	n/a
VOC	0.01	0.31	0.35

C. Visible emissions from the stacks serving Unit #6 and #7 (Stacks 6A and 7A) shall not exceed 10% opacity on a six (6) minute block average basis.

D. Visible emissions from the stacks serving Fryer #1 and #3 (Stacks 6B and 7B) shall not exceed 20% on a six (6) minute block average basis, except for no more than one (1) six minute block average in a one hour period.

(19) **Unit #9**

A. Capacity shall not exceed 2.2 MMBtu/hr.

B. Emissions shall not exceed the following:

Unit #9 (Oven) Emission Limits

Pollutant	lb/hr from 9A	lb/hr from 9B and 9C
PM	0.02	0.53
PM_{10}	0.02	0.53
SO_2	0.01	n/a
NO_X	0.22	n/a
CO	0.08	n/a
VOC	0.01	0.10

C. Visible emissions from the stack serving the heat source of Unit #9 (Stack 9A) shall not exceed 10% opacity on a six (6) minute block average basis.

D. Visible emissions from the stacks serving the oven dishcarge (Stacks 9B and 9C) shall not exceed 10% on a six (6) minute block average basis, except for no more than one (1) six minute block average in a one hour period.

(20) **Unit #22**

A. Capacity shall not exceed 1.42 MMBtu/hr.

B. Emissions shall not exceed the following:

Boiler #22 Emission Limits

Pollutant	lb/hr
PM	0.07
PM_{10}	0.07
SO_2	0.72
NO_X	0.20
CO	0.05
VOC	0.01

C. Visible emissions from the stacks serving Boiler #22 (Stack 22) shall not exceed 20% opacity on a six (6) minute block average basis.

(21) Barber Foods shall utilize mesh filters in the fryer vapor discharge duct as well as in the batter filtering unit discharge duct to help reduce the emission of particulate matter and VOCs derived from the frying operation.

(22) Barber Foods shall update the Department as to the latest methods and technology utilized to limit the quantity of particulate matter being emitted from Stacks 6B

and 7B (Fryer #1 and #3) and Stack #23B (the stack utilized for Fryer #2) on the following dates:

June 30, 1999
December 31, 1999
June 30, 2000

(23) Facility wide fuel use shall be limited to 90,000,000 cubic feet of natural gas and 50,000 gallons of #2 fuel oil (0.5% sulfur by weight maximum), based on a 12 month rolling total.

(24) The term of this order shall be for five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 1999.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
BROOKE E. BARNES, ACTING COMMISIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 11/04/1998
Date of application acceptance: 11/24/1998

Date filed with Board of Environmental Protection:_____

This order prepared by Mark E. Roberts, Bureau of Air Quality